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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,691	05/30/2001	Yoshihiko Yano	209212US0	6080

22850 7590 05/16/2003

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EXAMINER

NGUYEN, JOSEPH H

ART UNIT PAPER NUMBER

2815

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/866,691

Applicant(s)

YANO ET AL.

Examiner

Joseph Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 11 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15, 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Dye et al.

Regarding claim 15, Dye et al discloses on figure 1 an EL phosphor multiplayer thin film wherein a phosphor thin film and a dielectric thin film are stacked one upon another, said phosphor thin film comprising a matrix material containing as a main component at least one compound selected from an alkaline earth thiogallate and a rare earth element as a luminescent center, and said dielectric thin film comprising an perovskite oxide (col. 3, lines 1-33).

Regarding claim 17, Dye et al discloses on figure 1 the rare earth element is Eu (col. 3, lines 8-9).

Regarding claim 18, Dye et al discloses on figure 1 the alkaline earth oxide is a barium titanate.

Regarding claim 19, Dye et al discloses on figure 1 the dielectric thin film has a specific dielectric constant of 100 or greater.

Regarding claim 20, Dye et al discloses on figure 1 the dielectric thin film has a thickness of 100nm or greater (col. 3, lines 21-22).

Regarding claim 21, Dye et al discloses on figure 1 the EL phosphor multilayer thin film as recited in claim 15.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dye et al I as applied to claim 15 above, and further in view of Miura et al.

Regarding claim 16, Dye et al discloses substantially all the structure set forth in the claimed invention except the matrix material being a barium thioaluminate. However, Miura et al discloses the matrix material being a barium thioaluminate. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dye et al by having the matrix material being a barium thioaluminate for the purpose of improving the high luminance blue emitting electro luminescent device as taught by Miura et al.

Claims 1-8, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai et al in view of Miura et al.

Regarding claims 1-8, Kitai et al discloses on figure 1 substantially all the structures set forth in the claimed invention except the matrix material being a barium

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thioaluminate. However, Miura et al discloses the matrix material being a barium thioaluminate. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kitai et al by having the matrix material being a barium thioaluminate for the purpose of improving the high luminance blue emitting electro luminescent device as taught by Miura et al.

Regarding claims 11-14, Kitai and Miura et al together disclose all the structures set forth in the claimed invention.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai and Miura et al as applied to claim 1 above, and further in view of Abdalla et al.

Regarding claim 9, Kitai and Miura et al disclose substantially all the structures set forth in the claimed invention except the phosphor film being directly adjacent to two dielectric thin films. However, Abdalla et al discloses on figure 1 the phosphor film 13 being directly adjacent to two dielectric thin films 12, 14. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kitai and Miura by having the phosphor film being directly adjacent to two dielectric thin films for the purpose of effectively improving the performance of an EL device.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai and Miura et al as applied to claim 1 above, and further in view of Fujita et al.

Regarding claim 10, Kitai and Miura et al disclose substantially all the structures set forth in the claimed invention except alkaline earth oxide is tungsten bronze. However, Fujita et al discloses alkaline earth oxide is tungsten bronze (col. 6, lines 3-6). In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kitai and Miura et al by having alkaline earth oxide is tungsten bronze for the purpose of obtaining a thin film electro luminescent element having excellent characteristics (see Abstract of Fujita et al).

### ***Response to Arguments***

Applicant's arguments filed on 9/11/2002 have been fully considered but they are not persuasive.

Applicant argues that the combination of Miura and Kitai does not suggest that the incorporation of a phosphor layer and a dielectric layer in direct contact can provide electro luminescent devices that have high luminance. However, Miura teaches that incorporating the europium barium thioaluminate into a thin film EL device can provide a high luminance. Also, Kitai clearly discloses on figure 1 the phosphor layer 18 is in direct contact with dielectric layer 16. Therefore, the combination of Miura and Kitai would read on the now amended claim 1.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

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within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (703) 308-1269. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7382 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JN  
May 14, 2003

A handwritten signature in black ink, appearing to read "A. Wilson", with a stylized flourish at the end.

**ALLAN R. WILSON**  
**PRIMARY EXAMINER**